

ORAL HYGIENE

FEBRUARY-1917
VOL. 7 ~ NO. 2



PUBLISHED MONTHLY BY
THE BRIGGS-KESSLER COMPANY
DETROIT, MICHIGAN

The Effect

upon the judgment produced by knowledge gained by personal experience leads to displacing theories for facts

PYORRHOCIDE POWDER

when used as a dentifrice effects the judgment of the patient in that by discrimination, comparison or experience he is sure to recognize its superior qualities as a tooth cleansing and tissue healing agent: PYORRHOCIDE is medicated with Dentinol It allays Soft, Bleeding, Spongy, Receding Gums. These are influences which contribute to produce results in a co-operative home treatment for

PYORRHEA

PYORRHOCIDE cleans and polishes the teeth — removes mucoid deposits and the daily accretion of salivary calculus. These are essentials in pyorrhea treatment or prevention.

|| DENTINOL (antiseptic-germicide) applied by the dentist by means of the Dentinol Perfect Syringe (flat tip). Improved Dentinol Prophylactic Files. Improved Dentinol Pyorrhea Scalers. ||

THE DENTINOL & PYORRHOCIDE CO.

Incorporated

110 - 112 West 40th Street

New York

ORAL HYGIENE

A Journal for Dentists

Volume VII

Number II

FEBRUARY, 1917

THE USE OF THE X-RAY MACHINE IN A DENTAL OFFICE

ANDREW H. GUNN, D.D.S., New York City

This is a short and very practical paper and full of helpful hints to the beginner



WITH the demand for exactness in our operative procedures and the elimination of mouth infection the dentist ought to be in a position to operate his own X-ray machine. While the examination of the crown surfaces of the teeth is fully cared for by the orthodox methods, the same does not hold true for the roots and their apices.

There is little need in this paper to direct the attention of the dentist to the evils that accrue from septic foci in and about the teeth, and the manner in which they manifest themselves throughout the system. My object is to dissipate the idea which some of my confreres hold, that the operation of the X-ray machine is a field beyond their capabilities.

The principal reasons for the writer having entered into X-ray work were as follows:

The inconvenience in having to refer his patients to a specialist whenever a radiograph was necessary, also the fact that in many cases one exposure was not sufficient, a series being necessary to a complete examination.

For those who are considering this subject the following might possibly prove beneficial:

MACHINE

There are three different types of machines in use today—the Tesla coil, the Induction coil and the Interrupterless Transformer.

Where a portable machine is desired the Tesla coil will prove satisfactory, and is the least expensive, but a very long exposure is required with it to do the work.

The Interrupterless Transformer is the most powerful and also the most expensive, and is used principally by specialists.

The writer uses an Induction coil machine, which is less expensive than the Interrupterless and sufficiently powerful for dental work.

TECHNIQUE

What follows simply describes the writer's outfit and his own technique. The machine consists of a cabinet which covers about two feet square of floor space; and an X-ray tube stand. Inside of the cabinet is the induction coil and the interrupter. The coil increases the voltage from 110 to from 50,000 to 100,000 volts. The interrupter makes and breaks the current in the primary circuit and thus provides a continuous flow from the secondary circuit.

On top of the cabinet is an operating switch, a milliammeter, which records the flow of current in the X-ray tube, a spark gap for the back up or approximate voltage across the X-ray tube and a valve tube which allows the current to flow only in a certain direction, making the current in the X-ray tube unidirectional. "Inverse current or current in the wrong direction in the X-ray tube fogs the radiograph negative and in time spoils the X-ray tube.

The tube stand which supports the X-ray tube rests upon casters, so that it can be easily moved about around the dental chair. The X-ray tube stand permits of an easy and correct adjustment of the tube, which is very important, so that the rays can be properly directed to pre-

vent distortion of the picture, which is really a shadow-graph.

CARE OF MACHINE

The only care the machine requires is a little clear water and sulphuric acid added once a year and a new interrupter rod about every three months.

The valve tube will require occasional regulation, as it has a tendency to become high in vacuum. This is done by attaching one of the wires to the regulator, which is similar to the X-ray tube regulator, and turning on weak current for a few seconds the vacuum will be lowered.

The machine is connected to the X-ray tube by two cord reel wires fastened to the side of the cabinet.

The X-rays depend for the penetrative power upon the voltage of the current across the X-ray tube, which depends upon your machine and the vacuum in the X-ray tube. When the current is turned on if the meter reads from 5 to 10 milliamperes the vacuum in the tube is high and the rays will have very deep penetration. This is called a hard tube. Sharp crackling discharges will be heard in the atmosphere while the fluorescence in the tube will be a light olive green with canary-yellow flashes in it. This tube is too high for best results.

If the meter reads from 15 to 20 the tube will lack sufficient penetration while the fluorescence in the tube will have a decidedly bluish cast. This tube is too low for a

good picture and should be rested up for a period of a few weeks until the vacuum increases. If, however, the vacuum be lost from over-regulating it will have to be re-exhausted.

X-RAY TUBE

The best condition of the tube for dental work is one having a medium vacuum, the meter reading 10 to 15; the tube will possess a soft hum while the fluorescence in the tube will be an olive green with a suggestion of blue. This is called a medium soft tube and possesses a medium degree of penetration.

Since the needle of the meter is liable to be affected by static electricity, the reading cannot always be relied upon to indicate the condition in the tube. The best criterion by which one may be governed is the radiograph obtained.

However, the length of the spark gap that the X-ray tube backs up is a reliable indication of the relative vacuum in the X-ray tube. A tube backing up a spark gap of 5" to 6" is high and should be lowered; 4" to 5" is medium and is the best for dental work; 3" to 4" low, while less than 3" is too low and the tube should be rested up until the vacuum increases.

The spark gap "back-up" is the number of inches of air space the high voltage current across the X-ray tube will jump in preference to passing through the X-ray tube, and thus measures the

relative resistance the tube offers to the high voltage current.

The tube is lowered by attaching the cathode wire to the regulator and a weak current turned on. The regulator contains certain chemicals which when heated by the current give off gases which go into the bulb of the X-ray tube and lower the vacuum.

Care should be exercised in doing this, as there is danger of lowering the vacuum too much, which will render the tube useless until it is re-exhausted.

I might add that it is wise to have two tubes and alternate every other day with the reserve tube. This will keep them in good condition, needing very little regulation. On the other hand, if only one is depended upon it will continually demand lowering as the vacuum increases with constant use.

ACCIDENTS

Nowadays burns from the X-ray exposure in this work are practically unknown. This is due to the safety devices and the cognizance of the fact that the effects of the X-rays are culminative in living tissue. The average X-ray exposure in this work is from four to ten seconds; while the length of an exposure necessary to produce a burn with the power of my machine would be a matter of several minutes. So one can readily see that the average exposure is well within the safety margin. If half

a dozen exposures of four seconds duration were taken, no harm could possibly accrue from them. However, it is well for the protection of one's reputation to keep a record of all work done, noting the position and the length of exposures.

PROTECTION

The safety device for operation consists of a lead glass jar or shield in which is placed the X-ray tube.

The operator should not stand in the path of the rays, but behind the tube, or behind a lead-lined screen for additional protection.

A small aluminum disc is stretched across the small opening of the shield which absorbs the rays lacking deep penetration, thus preventing the skin from absorbing them. This safeguards the patient from possible accident.

FILMS

In dentistry films are principally used for the work and are supplied ready for use in three standard sizes. The No. 1 is $1\frac{1}{4}" \times 1\frac{5}{8}"$, the No. 2 is $1\frac{1}{2}" \times 2\frac{1}{4}"$, and the No. 3 is $2\frac{1}{4}" \times 3"$ in size.

Where small radiographs are desired, showing two or three teeth, the No. 1 size is used and is held in position by the patient. The rays are directed nearly at right angles to the surface of the film. This will slightly foreshorten the roots of the teeth. Where correct root lengths are desired, the angle formed by the surface of the rays directed perpendicularly to this imaginary plane.

Where a general examination is desired the larger sizes are used and are held in position by the patient biting down upon them as if on a cracker.

All films are supplied two in a packet, a dozen packets in a tin box, and should be kept in a lead box to keep them from becoming fogged by X-rays.

EXPOSURES.

Usually a No. 1 film will call for a five-seconds exposure with a medium tube. An additional second or two is given the Nos. 2 and 3 sizes, because the X-ray tube is a little further away from the film.

A hard or high tube will require longer exposure than a medium vacuum tube, due to the fact that the hard tube offers more resistance to the current and the amount of milliamperes in the tube is thereby reduced.

CASE MANAGEMENT

The writer is in general practice and does not claim to be a specialist in radiography. However, many of his friends refer cases to him. These patients call fifteen minutes before the hour, and in this way are taken care of without interfering very much with his general work.

The patient is seated in an upright position and assured that no harm in any way would come from the X-ray, and is told to sit perfectly still while the radiograph is being taken. The patient is warned to expect the current to be turned on very suddenly,

accompanied by a sharp noise.

The current is then turned on to acquaint the patient with the hum of the tube and machine. At the same time the milliammeter reading is noted and if the tube is too high it can be lowered.

The tube stand is then placed on the side of the chair the exposure is to be made, and the tube adjusted to the desired angle. See that no part of the stand or tube comes in contact with the patient, as otherwise a severe shock will be felt. This is especially true in case the wires which connect the machine to the X-ray tube touch the patient. Allow six inches between the wires and the patient, as the current will jump a gap smaller than this.

The film is then placed in position, selecting the size that is best suited to the case, and the exposure is made by turning on the operating switch. Properly carried out, the patient will always be agreeably surprised at the simplicity of taking a radiograph.

In cases of neuralgia and oral sepsis a general examination is made, with the larger sizes, and having determined the area of trouble a No. 1 film is used. This procedure will give the best results, as radiographs are shadow-graphs, and they will be clearest where the film is held up tightly against the teeth by the patient. The operator should never hold the film in place with his fingers. When the films are bitten upon to

hold them in position the shadow will have considerable distance to travel before coming in contact with the film, and therefore will not be quite as clear.

For example, hold a pencil against the surface of a white piece of paper and direct the light so as to cause the pencil to cast a shadow on the paper. Gradually move the pencil away from the paper a few inches. You will observe that the shadow will be strongest when the pencil is in close proximity to the paper and become weaker the further away the pencil is moved.

Therefore use No. 1 films where sharp radiographs are desired.

The film is then removed from the mouth, the length and position of exposure and name of patient is written on the packet, and is ready for developing.

DEVELOPMENT

Therefore use No. 1 films room are: A good ruby lamp, three china bowls for the No. 1 film and three glass trays for the No. 2 and No. 3.

Any good size clothes closet, made light-proof, will answer admirably for a dark room. A small electric fan will add greatly to one's comfort in hot weather.

With the ruby lamp turned on the films are removed from the packet and placed on the film holders, which are very satisfactory and inexpensive.

You can write on the handles of the film holders the



WHAT THE AUTHOR SEES IN THE PICTURES

1. Arrows indicate areas of rarefying osteitis at the apices of 12-year molar; second bicuspid. Deficient root canal filling in cuspid tooth. Fillings badly finished at gingival margins of teeth. Dark areas around lateral due to pyorrhea.

2. Left central root canal well filled. Right lateral rarefying osteitis at the apex. Root canals well filled.

3. Abscess areas at the apex of the cuspid and first bicuspid teeth. Deficient root canal fillings.

4. The use of the No. 3 film in orthodontia, locating the position of the unerrupted cuspid.

5. Partial impaction of wisdom tooth. Abscess area at the apex of the second molar. Rarefying osteitis at the apices of 6th-year molar, deficient root canal work. Pyorrhea pockets between wisdom tooth and second molar.

6. The use of brass wires in root canals to determine their length. Used in the treatment of pulpless teeth.

7. Abscess area at the apices of central and lateral incisors, indicated by arrow marks.

8. Abscess areas at the apices of four central incisors. Deficient root canal work in all crown teeth. Pyorrhea pockets between the teeth.

name of patient and location of exposure, to safeguard against error.

The films are placed in the developing solution until they attain a uniform blackness, which, if new developer is being used, will require about five minutes. Some developers come ready for use, while others are powders to be dissolved with water. The films are then dipped in water to wash off the developer, and are placed in the fixing bath until the gray coating completely disappears, which will take from five to ten seconds. In hot weather the developer must be chilled to 60 degrees Fahrenheit. The films should be placed under running water for about ten to twenty minutes. This, as has been previously stated, washes off the fixer or hypo and prevents red blotches or streaks on the surface of the negative.

When dry the negatives are placed in mounts and are ready for interpretation.

READING OF NEGATIVE.

There are two kinds of mounts—the transparent celluloid and the black card board or “radiomount.” The writer prefers the latter, as the light is concentrated better on the negative. The negative can then be viewed either by artificial light in a shadow box or by sunlight.

A reading glass will aid greatly in bringing out the detail of the tooth anatomy.

The reading of a radiograph depends upon the difference in density of the various tissues. Enamel, which is dense, will appear a very light gray, while the living pulp tissue will be a very dark gray. Lack of tissue or density will appear very black, while gold crowns and filling material will appear very white. Thus a good radiograph should possess good whites and blacks and intermediate tones of gray. The presence of small, round amalgam fillings on the buccal and lingual surfaces should be noted, as these are likely to appear as small pulp stones in the pulp chamber.

After two and a half years' experience in doing X-Ray work I feel that I can state, with safety, that the average abscess cavity or deficient root canal filling is very evident in the negative, and the diagnosis is very simple. However, there are cases that are extremely difficult to read, and the writer can only suggest the careful taking into account of the clinical symptoms, and in the event of failing to reach a satisfactory diagnosis, referring the case to a specialist or radio-dentist.

The accompanying negatives illustrate the kind of work that can be done by the general practitioner, showing that the X-Ray machine has its use in a dental office.

WHY A DENTAL DISPENSARY FOR ROCHESTER?

H. J. BURKHART, D.D.S., Director, Rochester Dental Dispensary

Read before the Rochester Medical Association, October 4, 1916



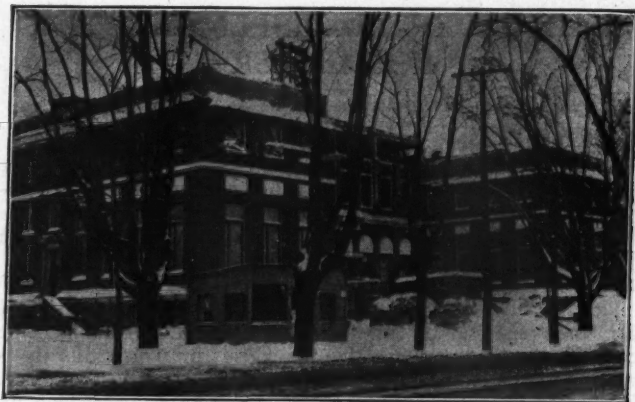
T gives me much pleasure to appear before this Society tonight, upon the invitation of your Secretary, for the purpose of briefly considering with you the work contemplated in the Rochester Dental Dispensary.

In a general way I assume you are of the opinion, as is the public generally, that the work will consist of the usual relief and rescue work of the ordinary college or hospital clinic, or infirmary. While at first a considerable portion of the time will be consumed in this sort of work, it is not the purpose to carry it on indefinitely, because that would defeat the main object of the founding of the Dispensary by Mr. Eastman—namely, to demonstrate the value of preventive dentistry. In that lies the hope for the future. Relief and rescue work in dentistry is all very good, and very necessary, but in the large majority of cases it gets us nowhere, for the reason that we perform the operations for the filling of the teeth after they have become fully calcified and in position in the jaws, or we have to remove badly decayed teeth because they are too far gone to save. Neither of these practices is of much

value, except perhaps to demonstrate the comparative value of materials, or improve the skill of the extractor.

We are, therefore, confronted with the problems of how best to accomplish the purpose for which this institution has been organized. There are few precedents to follow. Many theories have been and are being advocated. Everyone has his own peculiar idea and theories, out of which we hope to obtain sufficient knowledge to justify the generosity of the founder of this institution.

The plan of the Board of Trustees of the Dispensary, and the Director, at the present time, is first of all to organize a dental hygienists school for the education and training of young women to do prophylactic work so that their services may be available not only to dentists, but to the schools and public institutions. This school will be opened soon. The syllabus and hours of study are now in course of preparation. Lectures and demonstrations will be given by medical and dental men of Rochester and other places. The subjects taught will be anatomy, physiology, bacteriology, histology, hygiene, sanitation, dietetics, etc., together with lectures and talks on office etiquette, de-



The Rochester Dental Dispensary in construction.

partment, bookkeeping, card indexing, and such things as will make a young woman a valuable adjunct to an office. Of course you understand that in the teaching of the various medical subjects, the instruction will be general and not minute, and easily within the comprehension of the student. We believe that the training of young women to properly clean the teeth of the children, and teach them the value and benefits to be derived from clean mouths, will go a long way toward establishing correct hygienic conditions, and thereby prevent to a very large degree decay of the teeth. These young women will also be a valuable adjunct to the dentist in providing assistants who will do work that has been much neglected because of the drudgery and length of time required to do the same, and the unremunerativeness of it as practiced in the past.

The next step will be a survey of the mouths of the children of this city, which will be made by the members of the Rochester Dental Society, and the dental hygienists. This work will be valuable because it will show the need for dental service, and also for the purpose of comparison and study. The records will be kept in triplicate: one card will be sent to the central dispensary for study and filing, another will be kept in the school or institution where the examination is made, and the third sent to the parents, with the request that the family dentist or physician render such service as may be necessary, or where the family is without funds some arrangement will be made to do the work in the Dispensary. The cards on file at the Dispensary will be carefully tabulated and a study made of them. Some very interesting statistics will

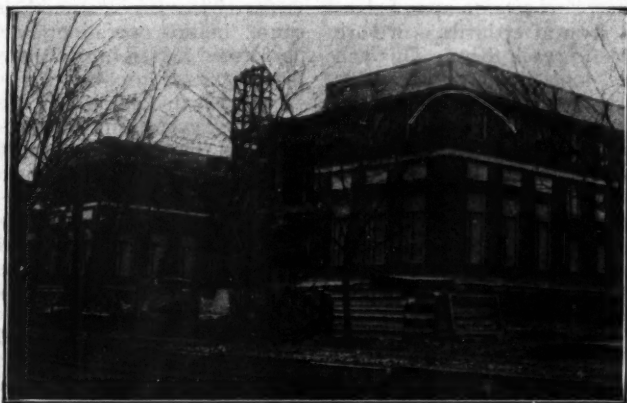
no doubt be obtained, and determine to some extent our course of procedure. We shall endeavor in cooperation with the school authorities to make careful and extended examinations of the mouths of defectives and the backward pupils. If only a small percentage are benefited by dental treatment, the work will be well worth the effort. All cases coming to the Dispensary for treatment will be thoroughly investigated by the social secretary to make sure that service is not rendered to those able to employ a regular practitioner.

It is our intention to employ a competent person to inaugurate and carry on a tooth brush drill in the schools and institutions, so that children may be taught by lectures, object lessons and pictures, the proper way of brushing their teeth. If possible some way will be devised to furnish

the children with brushes at a very moderate price.

In a general way, a campaign of education will be carried on by those connected with the Dispensary and especially the hygienists, so that the children and the public will be taught the necessity for clean mouths as a necessary step toward good health.

It is also our purpose to provide from time to time persons who will deliver talks, and lectures, in the schools and public institutions, on all matters relating to the care of the teeth. It is our intention to organize Mothers' Clubs for the purpose of teaching food values and the proper feeding of the babies, with the hope that dental and other conditions may be greatly improved. The necessity for a more liberal education along this line is apparent to all of you. I hope with your assistance and that of the



Another view in its present state of "unpreparedness."



Catherine Strong Hall, one of the co-educational buildings of the University of Rochester. Lectures to the first class of Dental Hygienists are delivered in this building.

Department of Health, and the school authorities, we may be able to accomplish something of real value, and set a precedent for other cities to follow. There will be a department for operations for cleft palate and hare-lip cases, and we shall endeavor to operate upon babies as soon after birth as we are able to reach them. This will be done for two reasons: first, because, as you know, better results are obtained by early operations, and secondly, so that appliances may be made to spread the arches as soon as the first teeth are in position, in order to provide ample space for the second set, and thereby not only improve the mouth for the purpose of properly masticating the food, but to restore the contour of the face. Operations will be performed for the removal of the tonsils and

adenoids, but before these are done all carious cavities will be filled and the mouth placed in a thoroughly aseptic condition. This rule will be rigidly adhered to and every possible source of infection about the mouth removed, whether it be due to decayed teeth, alveolar abscesses, or any other cause, before operations are performed. It is our theory that in order to prove anything of value in preventive dentistry, everything connected with the institution must be coordinated, and made to harmonize as much as possible. The research laboratory will be placed at the disposal of medical men as well as dentists, who desire to carry on experimental work.

An X-ray laboratory will be provided with all the latest appliances and facilities for doing this most important work. A competent operator

will be in charge and every effort made to bring this work up to a high standard of efficiency. Here too you will have the opportunity of assisting by your advice and labor, in developing one of the most important adjuncts to the practice of medicine and dentistry.

All of this work except the cleaning of the teeth of the children in the schools, and public institutions, will be done in the Dispensary. It could not very well be done in any other place, and carry out the purpose for which this institution has been founded. Objection has been raised in some quarters to the idea of a central dispensary, but in my opinion the wisdom of its founder and managers will be justified soon after the work is begun. While units may be of value for minor operations, the whole scheme would fall of its own weight by a splitting up of its activities. The mere matter of supervision alone would prove so vexatious and unsatisfactory, that few would undertake the work, and those who did would be doomed to failure at the very start. Altruism is a very good thing to talk about, but in actual practice there is not as much of it as many of us are led to believe, by some of the extravagant statements we hear. Human nature is quite the same in professional men as well as in others, and the experience of those who have supervised work done in units leads me to believe

that operators there watch the clock to wait for the whistle to blow, about as much as those who are engaged in other pursuits.

In my opinion, the sociological side cannot be considered in connection with this work, except incidentally. This city is not so large, but that any child can come to the Dispensary to avail itself of its benefits, without any great sacrifice of time or injury to its school work. But whether the ideas of the founder and managers are correct or not, makes little difference at this time. The facts are that we shall have a central dispensary, and it only remains for those who are interested in the work to give it their hearty support.

The whole subject of preventive medicine and dentistry is of absorbing interest. I say to you frankly that dentists must get away from the purely mechanical part of the work if any great advance is made in preventive dentistry. While the value, to a large extent, of the dentists' work will always depend upon manual dexterity, and the proper application of mechanical skill, there must be coupled with it a more general and liberal education along medical lines, and this naturally leads to a discussion of the relations that should exist between medicine and dentistry, and the medical man and dentist. To discuss this subject in detail or at great length is not the purpose of this paper, but I welcome this

opportunity of talking to you about it because of the seeming lack of harmony that has existed, and does to some extent prevail now between physicians and dentists. In my opinion, there is really no good reason why both cannot work together, with that singleness of purpose that should animate the true professional man. There are many of us who regret that there should be a separate degree for dentists, and I hope the day is not far distant when all who practice the specialty of dentistry will be required to have the degree of Doctor of Medicine. The medical profession has itself to blame because dentistry went off by itself. Some eighty years ago the then leading practitioners of dentistry endeavored to have medicine recognize dentistry as a part of the healing art, and sought admission to various medical schools for the purpose of teaching the specialty. Due to the narrowness and short sightedness of the medical men of that time, charters were obtained from legislatures, for the establishment of dental schools, and dentistry was launched as a profession with a degree of its own, when it should have remained as one of the specialties of medicine. From a small beginning, dentistry has grown until now there are close on to fifty thousand practitioners in the United States and Canada, with fifty or more dental colleges. Dentistry has its own organiza-

tions, periodicals, literature and scientific books, and is dividing into specialties as has medicine. It is unfortunate that medicine and dentistry have been separated, and that we are practicing under different degrees. It is due very largely to an inexcusable lack of coöperation.

Dentistry is in need of a more extended knowledge of general medicine, and particularly pathology, and medical men are equally in need of a better knowledge of dental histology and dental pathology. Within a few years the study of mouth infections has not only been a fashionable, but a very important one, and in many cases where no other cause could be plausibly found for the various obscure systemic disorders, the teeth have been made the goat, with the result that untold harm has been done in their needless and ruthless sacrifice. It seems to me that there should be a gentleman's understanding between medical men and dentists, that before a final decision is rendered in disputed cases, they should be considered in their various phases. Reasonable men, and those who place the good of their patients first, will have little difficulty by consultation, and an interchange of opinions, in arriving at a fairly satisfactory understanding. I know of many cases, and so do you where a dogged insistence upon having their own way by both physician and dentist has led to a bitterness of feel-

ing for which there was little excuse, and in the end the patient paid the penalty. We have striking examples every day of how easy it is to be mistaken in the reading of radiographs alone. You all know that most anyone can see anything he wants to, or satisfy himself that he sees what he thinks should be there, if he is so disposed. I refer particularly to radiographs of the teeth and jaws.

Just now there is a tremendous campaign being waged for the extraction of all dead teeth where the roots are not filled clear to the apex. Much harm is being done by this propaganda because as a matter of fact many of these teeth have been filled for twenty or thirty years without giving the slightest discomfort. There is no inflamed area about them, and no indication of infection of any kind. Nature in many cases has thrown its protection around those unfilled roots, which for some reason or other were not, or could not be, filled clear to the apex. While of course it is desirable that all roots be filled to the end, it very frequently is not possible to do so. Teeth are lost because of poor and faulty manipulation in endeavoring to fill all roots to the apex, by reason of the liability of drilling through the sides of the roots, or forcing the material through the apical foramen, and so I say, before you condemn all dead teeth of the kind of which I speak, consult the

dentist's record and you may change your mind.

When it comes to consider what should be done with loosened teeth in cases of pyorrhea, it is also well to go slowly, because in a very large percentage of cases the teeth can be made comfortable and serve their purpose for a long while. Of course, I do not wish to be understood as advocating the retention of teeth, where the jaws and gums are badly diseased, but the idea I do wish to leave with you is that most pyorrhea conditions may be greatly improved by mechanical means, and afterward by the use of proper remedies. No one should be deluded with the idea that a dose of ipecac or an injection of emetin will cure pyorrhea without mechanical aid and subsequent cleanliness and care of the mouth.

This brings me to a subject quite personal to myself, but of far more importance to you medical and dental men of Rochester, and the public. I refer to the attitude which you will assume toward this institution when completed, and the work which is to be done there. While it will be known as a Dental Dispensary, a very considerable part of the work contemplated will require the service of medical men. If we are to prove anything of value in preventive dentistry it must be recognized that tonsil, cleft palate and hare lip work are closely allied with prophylactic and orthodontic work as well as

the treatment and filling of the teeth, and the restoration of the mouth to a healthy condition. All these things must be co-ordinated and we must at least assume at the outset that one is dependent upon the other to some degree if we are to establish harmonious relations, and work towards a common goal. This dispensary is not intended to be an institution for the education of dentists, or to exploit any person's theories. It will be an open forum where all may have an equal chance. While many of you medical men have shown an interest in the proposed work, I am going to ask of you something more than just perfunctory assistance. I am here to invite your cordial coöperation in our various endeavors, and in that I am sure I voice the sentiment of the founder of the institution, the Board of Directors and the dentists of Rochester. This is no private preserve of my own; I have no ideas or theories which will not be changed or modified, after a mature consideration of anything that may be presented, looking to the accomplishment of our purpose. I am the representative of all of you medical men, dentists and the citizens of Rochester, and my success or failure or that of the Dispensary will be and should be your concern quite as much, or more than my own. I realize very fully the responsibilities of the position and I have had experience

enough in other activities, so that I am very well aware of the fact that no one can, singly and alone, make a success of an enterprise of the magnitude and importance of this one. It is only by good team work, cordial coöperation, sympathy and real unselfish devotion that we achieve success anywhere. There are other sides that we professional men should not lose sight of—the eyes of not only the dental, but the medical world are upon us, and we must not fail, because the good name of the city is at stake. And, furthermore, if we are to obtain assistance from philanthropists and men of wealth in the future, to carry on experimental work and demonstrate our theories, we must render a service that will satisfy them that their investment is worth while.

There is a most unusual and unique situation here, in the organization and maintenance of the Dispensary. Mr. Eastman makes his most generous contribution without any restriction as to management, or the particular lines of activity to be followed, except that this institution shall be for the benefit of the children of Rochester. Thirteen prominent business men contribute a thousand dollars a year each for six years, and give much valuable time in addition. The City of Rochester contributes \$20,000 a year for the work in the schools. Surely with this backing and the incentive for performing a great service

to the needy poor, not only of Rochester, but other cities, because if the work here proves satisfactory, other cities will follow, there should be no end of enthusiasm here and willingness to make some personal sacrifices to make this institution the most effective agency for good in its special field in the world.

I see in this project the opportunity for doing a wonderful work for the children of Rochester and those who come after them. We have

before us a wide field for our activities and the great good and comfort which we can bring to untold numbers should spur us on to our very best efforts. I invite you again, as cordially and sincerely as I know how, to take a personal interest in our work, and give us the benefit of your advice and assistance to make the Rochester Dental Dispensary the foremost institution of this kind in the world.

OPENING THE DOORS OF DENTAL KNOWLEDGE TO THE PEOPLE

RICHARD GRADY, M.D., D.D.S., Dental Surgeon, U. S. Navy, Annapolis, Md.

The following was delivered before a mixed audience at the Forsyth Infirmary, Boston, Mass. Dr. Grady was one of the first workers in Oral Hygiene and gave freely of his time and money to this end. Dentistry owes him a debt of gratitude for these early efforts.



WITH the permission of the Navy Department, it is congenial to my warmest feeling to respond to the invitation to inaugurate the series of lectures on oral hygiene in this magnificent building "dedicated to the children." I come to it with hearty love and admiration for Mr. Forsyth and his brothers, whose memorial it is. Founded through their munificence, the name will ever be a synonym for public spirit and benevolence, best expressed in Lowell's "Vision of Sir Launfal":

The Holy Supper is kept, indeed,
In whatso we share with another's
need;

Not what we give, but what we
share,—

For the gift without the giver is
bare;

Who gives himself with his alms
feeds three,—

Himself, his hungering neighbor,
and me.

Not even those who watched the progress of this Forsyth Dental Infirmary, as I know they did almost as tenderly as if it were the progress of a living creature, have greater reason, I am persuaded, to exult in its establishment or to hope that it may thrive and prosper than thousands at a distance who have in the principles of its success and bright example a deep and personal concern. I had preserved a clipping from the Journal of the American

Medical Association of March 19, 1910, which read, "Fortune Given for Care of Teeth—Thomas A. Forsyth, Boston, plans to give \$2,000,000 for the care of the teeth of school children of the city, as a permanent foundation by which every child in the city to the age of sixteen may receive expert dental service free of charge."

It well becomes this great and enterprising city that she should stand out foremost in such a cause as oral hygiene. It particularly well becomes her that among her numerous and noble institutions she should have this splendid building "dedicated to the children," where only about two per cent (2.4) are refused as unworthy. That there was a real need for such an infirmary is abundantly shown by its first annual report, January 1, 1916: total registration, 19,930, with 356 average daily patients; total operations, 128,404; orthodontic treatments, 2,868; teeth extracted, 16,074; children at oral hygiene lectures, 7,701, etc. It will thus be seen that its work has been wonderfully blessed to thousands of children. A pioneer in the field, it is not an experiment but a success—the model dental infirmary of the day. It stands an example of efficient service, not only to the children up to sixteen years of age, but to soldiers of the National Guard of Massachusetts. ("No soldier is any better than his teeth.") It renders service regardless

of race, creed, color, or locality; a service in beneficence comprehensive enough to rest broadly upon the Golden Rule, "Thou shalt love thy neighbor as thyself."

Having advised with those associated with the infirmary as to the character of the talk today, I will speak of the origin and progress of the national oral hygiene propaganda, especially the origin, with which I may be more familiar than many. How did it originate? It grew out of a paper I presented to the American Medical Association, June, 1900, entitled "Cooperation of the Public Schools in Teaching 'Good Teeth, Good Health,'" supplemented by a resolution I offered in the National Dental Association, July, 1900, creating a "Committee on Oral Hygiene in our Public Schools," of which I was the first chairman, serving four years. In that distinct and personal way I became known as the "father of the national oral hygiene movement."

Did I have the time it would be my pleasure to give you the names of the good men which the cause of oral hygiene gathered to itself in the beginning, its early and abiding friends, some of whom are Drs. Corley, Ebersole, Wheeler, Merritt, Hyatt, Nodine, C. N. Johnson, H. H. Johnson, Conzett, Jackson, Warren, Fones, McFadden, Towner, Stiff, Faught, Rhein, Kelley, Ottolengui, Smith, Belcher, Thorpe, Patterson, Hoff, Frankland, White, Bro-

phy, Hopkinson, Hardy, Heatwole, Libbey, Thompson, etc. However, it is not so much what men have done in the movement as what they believe and their enthusiasm that make for the ultimate success of the endeavor. Oral Hygiene is an act that makes for social betterment. The essential thing is education and the consequent advancement of the people.

In 1899 I was chairman of the committee on oral hygiene of the Maryland State Dental Association, and also (as now) resident dental surgeon at the United States Naval Academy, where I had the care of mouths and teeth of hundreds of young midshipmen from all parts of the country.

Previously I had been visiting dentist to five schools and institutions in Baltimore. The examination of many boys and girls from six years of age upward, and young men from sixteen to twenty-four years of age, had given me an opportunity of noting the condition of the teeth of young people possessed by few, if any, dentists.

As a professional teacher, I recognized that there was a growing demand that the subject of hygiene should receive increasing attention in general education; that happily it requires less knowledge to keep what we already have, than to recover it when lost; that preservation of health can be learned.

Fully persuaded that a large percentage of dental caries

is absolutely preventable, alike pleasing and imperative was my appeal to the ambition and intelligence of dentists to prevent rather than repair the ravages of decay. Is it right, I asked, that the vast research respecting hygiene of the mouth and control of dental disease, which has employed practitioners of dentistry for years, should go for nothing in education; that this wealth of knowledge should be passed by as if it had no existence, and the young people of the country grow up as ignorant of it as if they had lived centuries ago?

A large amount of suffering may be avoided through proper knowledge conscientiously employed, and it will be a great saving of "Young America" and thereby of all America if dental inspectors are appointed to visit the schools and examine children's teeth, and dental clinics are established for the benefit of poor children.

Treating the diseased teeth of school children at public expense may seem entirely out of the question to some persons; yet why should it be less reasonable to have visiting dentists than teachers of physical culture or visiting nurses, or even medical inspectors? If bad teeth could be prevented, the gain to the state and the individual would be of enormous value, as many diseases can be traced to defective teeth.

It is the noble privilege of the teachers of the country to

promote in some degree the preservation of the teeth of those under their care, and this they can do by inculcating early and earnestly, and with the emphasis of a high religious duty, the principles of oral hygiene. The life of every man and woman and child should be guided by its laws.

In recent years dentistry has grown side by side with medical science. Now it is recognized that the teeth are as important objects of medical study as the eye and ear. The same spirit which led to enlisting the active co-operation of the public school concerning measures for preventing the spread of contagious diseases should be insisted on respecting the care of the teeth. A movement of physicians to secure public action in this matter at once exerts a moral force. Mothers are more watchful and painstaking to avoid the disgrace of decayed teeth in their children's mouths. Children are moved to take a pride in spotless teeth; and in this age to acquire an ambition to have things white and spotless about the person is commendable.

The inculcation of good oral habits among children should be insisted upon. The hope of dentistry is to employ prophylactics instead of remedies, to prevent decay instead of treating it. It is essential that a child be taught how to brush the teeth properly. A toothbrush drill at school is as needful as any gymnastic

exercise for the preservation of health. There is strong reason to believe that many diseases of the nervous system, respiratory organs and alimentary canal may be due to the fact that the masticatory organs have been neglected.

A paper on the theme of which I wrote in 1900 would, a few years before, have excited but little interest even among dentists; in fact, in the American Dental Association in 1895, a resolution relative to the care of the teeth of school children did not even get a second. Today parents, teachers, influential citizens and even professional men are being educated to the full comprehension of the fact, that, of all diseases of a parasitic nature to which mankind is susceptible, dental caries is by far the most frequent. The only proper course to pursue in dealing with this question is by persistently and intelligently educating the minds of the public as to its exact status, and whatever we wish to see introduced into the life of the nation, we must remember, must first be introduced into its schools. The school is the one force that can unify all conditions of society. Here we have the children of the nation in their entirety and we can, if we will, teach them that soundness of teeth is in itself one of the best evidences of general soundness of the body.

Prevention of dental caries depends, first of all, on strict cleanliness of the mouth and

teeth, the importance of which cannot be overestimated. The details necessary for the proper fulfillment must be given in text-books, in public talks and in the public press. Such in part is what I said in the paper submitted to the American Medical Association sixteen years ago, and it is chiefly for its retrospective interest that it is quoted.

The grain of mustard seed planted in 1900 has grown to a large tree spreading its branches through the length and breadth of the land.

Of 1,063 cities and towns reporting to the U. S. Commissioner of Education, 564 have inspection of teeth, and 154 have dental clinics, where pupils are treated. The work is paid for by parents, city charity, co-operative dentists, boards of education, boards of health, civic clubs, etc.

The establishment of free clinics for school children is a splendid example of true civic helpfulness. The first clinic exclusively for school children in New York City cost, for treatment of each child, \$3.10, and including equipment, \$4.10. In New York City the cost of educating a child is about 20 cents a day. In one school the number of absentees due to toothache and allied mouth troubles in two months, among children with or without dental treatment, showed absentees receiving dental care, 38 per cent; absentees not receiving dental care, 94 per cent.

It is estimated that in New

York City, 80 per cent of the absentees are due to aching teeth or illnesses therefrom. If the same rate obtains throughout the year the loss of money to the city equals an enormous sum. The Russell Sage Foundation Fund reported that of 7,608 pupils examined, children with defective teeth progressed six per cent more slowly than normal children.

As Boston has the Forsyth Dental Infirmary with an endowment of \$2,000,000, so Rochester, N. Y., will have a similar institution, also the offspring of public spirited citizens who believe that their money given to such a cause is well bestowed. (It is reported in Boston that a wealthy man of California is to found a dental dispensary on the model of the Forsyth and Rochester.) Mr. George Eastman, of Rochester, and his assistants, were inspired by the noble example of the Forsyth Brothers and the success of the Free Dental Dispensary of that city, the first of its kind in America. The architect of the Rochester structure, after visiting this dental infirmary, said: "The children came much as they would to an outing or little party, and left with the same smile as when they entered the doors." "This," Mr. Thomas A. Forsyth himself says, "was our intention from the first plans drawn up for the infirmary."

As a result of the agitation for the introduction of public dental service, there are den-

tal surgeons in the Army and Navy, it being recognized by Congress that their services are imperatively required for humanitarian, hygienic and economic reasons. On board ship, the medical officer, in his lectures on hygiene topics, takes up the subject of oral hygiene. Dental lesions have been responsible for a great deal of sickness and even death in the naval service. Until the organization of the Navy Dental Corps the curriculum of the Naval Medical School included a course of instruction in stomatology and dental emergencies. When enlistment examinations are made, the examining surgeon especially observes the state of the mouth and teeth of each recruit. Much of the stomatitis and gingivitis occurring in the navy is, in part, attributable to the constant use of match sticks for toothpicks.

The results when inspection and regular treatment are given school children is illustrated in Muskegon, Mich., and Cleveland, Ohio. The school clinic in Muskegon, for example, in two months brought about noticeable change in the school work of theretofore backward children; "the cost, that is money value saved as represented by non-promotion prevented, far exceeded the expense of the clinic."

In Cleveland a general inspection of one school was made by ten dentists, and out of 846 children examined, only three were found whose

oral condition was perfect. The discovery was startling to the principal. Forty boys and girls who showed the worst oral condition were selected for a scientific experiment, namely, to prove the efficiency of good oral conditions and their superiority in maintaining a higher order of mentality.

The final record for 27 children was made up at the end of the year. In the words of the principal: "Undoubted proof was established that by keeping the teeth in perfect condition, by living up to the laws of oral hygiene, these 27 children doubled their mental ability, gained in power and endurance and bodily strength, and showed marked improvement in personal appearance and habits. A physical, mental, moral gain in the child produces an economic and financial gain to the community. Can anyone question that a practical working knowledge of oral hygiene is worth while?"

In Chicago the work of caring for the neglected teeth of poor children in schools is on a permanent basis. Dental infirmaries, equipped in public school buildings by dental supply houses and citizens, are carried on by volunteer service. Examination of fully 30,000 children shows about 95 per cent in need of dental service. An endowment of \$10,000 a year for ten additional infirmaries and salaries, until such a time as the city can be induced to take on the work, has been

given by Mr. Julius Rosenwald, a public-spirited citizen. When Dr. W. A. Evans was commissioner of health, he secured an appropriation from the city council for a supervising dentist and said: "See that no person needing dental work and unable to pay goes without."

The story of the Newark, N. J., Clinic shows how much needed is the help of organizations like women's clubs and philanthropic societies in securing funds for equipment and supplies to supplement the volunteer services of the dentists until the city has assumed charge. There the agitation for dental clinics was started by a group of women. The clinics, as organized, were almost exclusively used by school children. With the help of volunteer dentists and the nurse supplied by the Nurses' Association, the clinics were kept going until an appropriation was granted by the city. They were then withdrawn from private management and organized under paid dentists.

Many of the largest corporations of the country have dental clinics to care for the teeth of employees, and the following are but illustrations from several cities of the widespread interest in dental inspection. Industrial employers recognize that dental dispensaries are needed in factories and department stores, etc., because sickness, absence, or disability necessitates the "breaking in" of new workers. The Colorado

Fuel & Iron Co. has a dentist who attends gratuitously to all patients needing dental work. The chief surgeon, R. W. Corley, M.D., wrote to me this month: "We are starting free dentistry to children at all steel works, and at all our camps, which will mean probably between twenty and thirty thousand individuals"; Lord & Taylor, New York City, treat about 500 cases each year, actually 775 from May 1, 1914 (when clinic was opened), to December 1, 1916; at John Wanamaker & Co.'s, New York City, only examination and cleaning service is given; R. H. Macy & Co., New York City, have a dentist who gives full time to the employees at the store and on an average takes care of 112 cases a week; Sears, Roebuck & Co., of Chicago, maintain a dentist's office in which the mouths of the employees are examined, advice given as to kinds of work needed, and an individual talk on the care of teeth; the Larkin Co., Buffalo, engages a dentist to give his whole time to dental work for employees. In 1911 the Armstrong Cork Co. established a dental clinic for the use of employees of its Pittsburgh factory—about 1,200 people, age ranging from 16 to 60 years. The company does not limit the amount or character of the dental operations, but allows the dentist to use his judgment. It costs this firm a little more than \$4 per head to take care of its employees'

teeth. The Amoskeag Manufacturing Co., of Manchester, N. H., furnishes a free dentist for all employees' children 14 years of age and under; the Metropolitan Life Insurance Co., of New York, opened a dental bureau June 1, 1915. Five chairs have been provided. Two thousand six hundred employees will have their teeth examined and cleaned.

The question is often asked, What is the motive back of such an idea? Is it purely humanitarian or solely a dollar-and-cent idea, based on a rising wave of increased inefficiency? Some firms answer the question one way, and some another. No matter what the motive, whether partly philanthropic or partly selfish, it is a recognition that healthy workers are less liable to make mistakes, are steadier, surer and safer workers.

Only about 10 per cent of the public, it has been claimed, formerly made a practice of going to the dentist regularly for treatment. Has that percentage been raised as the result of all the educational work of the past 16 years? Why should it not have made a greater impression? Are all the people going to the dentist who are in personal need of dental attention and who can afford to do so? How shall we best educate the children in our schools? By lectures, toothbrush drills, awarding prizes, or marking on monthly reports their standing in mouth hygiene as is done on department cards?

Which is the best method of conducting the dental dispensaries—by clinics, such as Boston has, or by dividing the territory into sections and having an individual dispensary in each school building as in Detroit? In other words, centralized or localized dental clinics? It is argued that parochial school children do not feel free to attend a school dental clinic in a public school building. In Cleveland the dental clinics in public and parochial schools were separate in 1910. At Bridgeport the effort is confined largely to preventive work by prophylactic treatment, lectures and toothbrush drills, by women educated and trained to work as prophylactic operators, known here and there as "dental hygienists" and not nurses. In the Forsyth the whole-day "operator" receives \$1,000 per annum and the half-day, \$400. It is considered an honor to be connected with the clinic. Rochester will have a combination of the Boston and Bridgeport plans. At Philadelphia there is a central dispensary and branches in school buildings. By whom should the dental dispensary be conducted—by the Board of Education as in Bridgeport, or under the control of a body of laymen and professional men as in Boston and Rochester? The intelligent interest awakened is amply manifested in what I have told you about dental decay among school children, about the effect of dental impair-

ment (physical, social, educational), about the status of dental clinics, about dental defects and absences, about economic loss to the educational system. In 1913 nearly 200,000 New York school children failed of promotion and the cost of re-educating these equaled nearly four million dollars.

In the words of Dr. Belcher, "This work gets into

your blood. Let him who will ask 'Where is the fruit?' Its value and usefulness grow on you until you cannot give it up if you would." To each of us is given the honorable privilege of doing his part, however small, in that work. Let at least the satisfaction be ours that we carried onward the lighted torch in our day and generation.

INCREASED EFFICIENCY AND THE DOLLAR

D. W. BARKER, D.M.D., Brooklyn, N. Y.



N reply to Dr. Kells, I wish to point out that increased efficiency does not solve the problem. By increasing his efficiency he has been able to do more business, thereby increasing his income, just as he would have done had he opened another office, thereby doubling the amount of business he might do; or to use another similee, just as a merchant would do if he ran two stores instead of one. I infer from his article, though he does not say so, that his prices remain the same as they were twenty years ago. Assuming that to be the case then the fact remains that, in spite of the fact that he has doubled his efficiency, he is still a loser in the game, because had he doubled his fees to keep in ratio with the increased

cost of commodities, his income now would be four times what it was twenty years ago instead of only twice that amount. Had Dr. Kells doubled his fees and his efficiency remained the same, he would then be playing even. If the merchant aforesaid continued selling his goods at the prices obtained twenty years ago, while his neighbor sold at the prices current today, the fact that he did twice as much business would not save him from bankruptcy, would it? In fact, the more business he did, the worse off he would be. No, increased efficiency does not solve the problem; rather it makes it worse, because it does not alter the ratio between the cost of all other commodities and the prices of dental service. By doubling the efficiency, Dr. Kells has merely doubled his losses.

THE DUTY OF THE INDIVIDUAL MEMBERS OF THE PROFESSION TO ITS ORGANIZED EFFORT

D. M. CATTELL, D.D.S., Memphis, Tenn.

Read before the Memphis Dental Society, Oct. 19, 1916



HOLD every man a debtor to his profession, from which as men, of course, do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."—Bacon.

In reviewing the history of any great profession, we find that the course which it takes is in the main similar to histories of nations, religions, creeds, political parties; in short, any organization in which many men are gathered who have a common purpose. That is to say, there must be a beginning, a slow but steady progress, certain leaders, men of brilliant minds to carry on the ideas as first conceived, a slowly increasing efficiency which seems to surmount even the highest rungs in the ladder of success, or later on, a gradual decline, until finally lost in oblivion.

Of all the professions, medicine and dentistry present two of the most striking examples of this fact. We know, for instance, that in the days of the ancient Egyptians, these two divisions of the healing art were practiced, and who is there to say but that perhaps in those ancient days

the representatives of these professions made discoveries as yet unknown in the research laboratories of today? That the two professions have suffered set-backs, and have at times had their records and their works almost obliterated from the pages of time, is a fact that cannot be denied. When we take into consideration the present day activities of both the medical and the dental professions, and recount their achievements by the score, we are justified in making the statement that their star of success is surely ascending into realms undreamed of by the most optimistic of mankind.

But in the hour of our triumph, when the laurels of success are within our grasp, a dark cloud of ill omen is even now beginning to obscure the radiant rays of our achievement. There is nothing in life that is more harmful than that which strikes from within. An army may withstand the repeated attacks of an overwhelming foe, and yet succumb to the treachery of a single man whose uniform and insignia is similar to theirs. The traitor of his country is more dangerous than all of the allied forces of the country's enemies. The reprobate son brings more

tears to the eyes of his parent than all of the other hardships of life combined, and the snake is a more dangerous enemy than the lion. The dental profession has not been exempt from having amongst its members the type of men, or rather the type of individuals, whose treachery has done more to wreck the hopes and aspirations of its leaders than all the ignorance and opposition with which they have had to contend since its earliest days. It is well that we should become specific in our remarks and state plainly to the world and to ourselves just who these men are, in order that humanity and the profession may know them under any disguise which they assume. The advertising dentist is the Judas who sells the ideals and the fondest maternal hopes of his profession for the paltry thirty pieces of silver. How any man can sit at the feet of his instructors for three years and listen to their exposition of the aims and ambitions of a profession of which he is soon to become a member, and then go out and do, not what he has been told, but what his greed for the almighty dollar suggests to him, is past human comprehension. To this traitor the ethics of the profession are a mere jumble of words. To him the oath he took upon the day of his graduation is a mere statement to be discarded at will, and the society of ethical men means no more to him than fellow prisoners to the convict serving a life term. He has forgotten the debt

which he owes to his profession and humanity; his conscience and sense of moral obligation are killed and he worships at the shrine of Mammon with all of the ardor of which a man of his type is capable? Humanity pays the price and the health and the life of the community are jeopardized and the debt incurred thereby is laid at the feet of the dental profession.

Men of Memphis, let us hide our faces in shame that these conditions exist, and that some there are from among our own number whose names besmirch the character and the good name of our profession. Let us up and arm ourselves for a fight which shall end in the extermination of these treacherous and insidious workers of our destruction. Let us begin to fight them legally, to fight them publicly and to instruct our people as to the dangers incurred by supporting them. Medicine has killed the quack; the dental profession must kill the advertiser, and, in the words which Dr. Mayo has made famous, we ask, "Will we do it?"

Memphis answers, "We will!"

Dentistry, like all other sciences, is the result of evolution. It is the survival of the fittest in methods, the result of natural selection in technical effort and the elimination of the unfit and out of date in instruments and materials. The operative dentist of today owes his present exalted position to the labors and studies

of the men of the past. Not only to the men who have been operative dentists, but to all men who have sought to alleviate the suffering of men in regard to their dental conditions and to all scientists who have sought and found the secrets of nature, and having found have freely given of the results of their unselfish labors for the benefit of humanity. No greater honor belongs to any man, no monument should rise higher than that devoted to the perpetuation of the memory and the deeds of men, living now and those long passed to their reward, who have with patient zeal and undaunted will sought until they found, and having found, have gladly and freely given of the results of their labors to all men. Upon the labor of such men have we built securely and well. In our own profession we owe to the genius of G. V. Black, more than to any one man that the world has yet seen, a very large part of the knowledge we have built into the science of filling teeth. If I were to pause here and say that which is in my heart to say concerning that truly great man that has so recently passed beyond our ken, I would have no time to devote to the subject in hand. Suffice it to say that he was my ideal and inspiration, and if I have attained success in any degree in our beloved profession it is because I have followed, as closely as my poor ability would permit, in the path he marked out. His

writings are my professional Bible, his words my models in my lectures, and his operations my ideals in all of the work I attempted to do for my patients. The writings I have been permitted to give to the profession, the lectures I have delivered to post and undergraduate students, and the work I have done for my patients all bear the indelible imprint of his influence upon my professional life. I consider G. V. Black the greatest dental scientist that has ever lived, and as long as I live his memory and his work will live in my heart and life.

Dr. Black took the chaotic methods of the past and systematized them in such a way that he brought order out of chaos and made it possible for us to definitely correlate methods and materials in an orderly manner, that we might be able to get the best-out of all that was good and bring it over into the realm of our own specialty.

You know when one enters a profession he places himself under considerable obligation to that profession. He counts on pursuing its literature and taking advantage in all the emoluments belonging to him as a member. All new thoughts, appliances, and methods of procedure that come into the profession he seeks out and appropriates to himself whatever he wishes.

What are we, individually, doing for the profession in return for these things given so freely? The profession surrounds, lifts up, and places

everyone of its members on a higher plane than the common run of humanity.

What have you done, brother, what are you doing to show your appreciation of the benefits bestowed on you by your confreres? A great obligation or contract between you and the profession was implied when you were allowed to enter its portals; are

you fulfilling the obligation?

One of the ways to show appreciation and place yourself in the way of returning thanks for the many courtesies extended is to join with your fellows in society work, stand shoulder to shoulder with others that are bearing the burden of professional advancement.

A FEW DIVIDEND PAYERS FOR THE DENTIST

"BY WHO"



O you realize the importance of looking right in the eyes of the public from the personal appearance standpoint? Look in the glass and see if you are pleased with yourself. Barbers' and manicures' services pay big returns for a dentist. Get the habit!

Is your own mouth in such shape that you are in a position to use it as an example in selling prophylaxis?

Many men will preach and practice asepsis until they nearly fall backward on the subject, and yet there will be dirt and filth galore on their equipment that the public can't help but see. Look yours over!

How can a dentist expect to sell dentistry to the public when he has never sold himself?

Have you learned that the only way to be fair to your-

self is to be paid for everything that you do on an equitable time basis?

Have you ever stopped to think that you owe the patient nothing simply because they came to you—that she had in mind being good to herself, and not for your benefit? When you do realize this you will quit giving 1916 dentistry at 1875 prices. Every commodity except dentistry has of necessity increased—"why not?"

Do you know that every time you sell a plate for \$15.00 you would be money ahead to hand that patient \$5.00 and pass the grief on to the other fellow? And yet many men are still selling rubber plates at \$15.00.

Do you know that there are millions of dollars' worth of treatments in the mouths of the public that the dentist has done and never been paid for? Why not be paid for each treatment—then the

burden of coming back is up to them? You have been paid for your service. Think it over—it is one of the loose ends of dentistry.

Did you ever stop to think that a sliding scale estimate in dentistry is unsatisfactory to dentist and to patient? Why not make it large enough in the first place? Then both your ideas are on the same figure. A bill rendered for less than the estimated figure leaves a good taste in the mouth of your patient, and they talk about it to your credit.

Do you realize that an itemized bill, listing individual operations, puts you into competition with the man who makes crowns at \$5.00, and the matter is threshed over and decided against you when you are not present to defend yourself? Indicate on your statements that items can be examined by calling at the office.

Do you ever stop to think how much good it does you

when your patient shows up a set of teeth that has had thorough prophylactic treatment? It is better than an electric sign—and no dental depot bills attached to the work. It is a boon to the public and the dentist. Have you worked out its possibilities? Restorative work is at the best only the *wooden leg of dentistry*. Why not prevent its necessity by preventive measures? It is profitable, and its right.

Do you operate your practice on the same sound, accepted business principles that the banker or merchant does? When you do, you will have the same comforts and pleasures they have.

Do you realize that when you display the laboratory equipment to the patient they are liable to get their minds fixed on the mechanical side and want to pay mechanics' charges instead of professional fees? Have a good laboratory, but hide it!

CORRESPONDENCE

Editor Oral Hygiene:

Your splendid magazine is unique among dental publications, and if the other members of the profession value it as I do, they look forward to its monthly visit with no little impatience.

Your joke department furnishes us with many a laugh and I write to suggest that same be enlarged and extended to include, "Experiences of the Dentists."

We all have had experiences which are interesting enough, from a comical or tragical standpoint, to make good reading. I know that when we dentists are

sitting around the hotels waiting for our meetings to begin, or in other "fanning bees," no man seems to be unable to take his turn and tell a little incident in his own practice that will make a laugh or cause a little serious thought.

One of the most interesting articles in your magazine this year was in the July number, entitled "My Star Patient," by Kent Kane Cross. That was rich with humor. Now I'll give you one that was a near tragedy. (But I trust you not to pass this along with my name attached.)

About a month ago I began work in the mouth of a beautiful young married woman of about twenty-six years of age. She was in good health and is a splendid, sensible young woman. Her third trip to my office was made on one of those sultry, depressing days, and I kept her in the chair for over an hour. I had a matrix retainer on an upper first molar and was inserting one of those immense, long drawn-out amalgam fillings, when I noticed that the saliva had about filled her lower jaw.

I immediately placed the saliva ejector in the mouth when, to my amazement, the woman began to struggle, threw the ejector from her, tore my matrix retainer from the tooth and got from the chair in spite of my efforts to hold her, which I did thinking that she had become momentarily deranged. Without her hat, she rushed from the office and about a mile up the street to her home. I followed, still believing that she was out of her head, and possibly might need assistance on the street. Yet, whenever I got closer than a hundred and fifty yards to her, she would break into a run, making me feel that by following her I was balling things up worse than ever.

I went straight to her home. Fortunately, her mother was there and I was admitted immediately.

The young woman declared that I had placed something in her mouth that was rendering her unconscious and believing that I was trying to take advantage of her, she escaped from the office!

Now was that not a serious predicament for a youngster to be in who for twelve years had struggled up the "hill" and has just arrived at "full practice?"

I can explain it in only one way—that the woman was just on the verge of fainting and that I was unfortunate enough to put the saliva ejector in her mouth just at the wrong moment. Not knowing what it was and feeling her senses leaving her, she jumped to the conclusion that it was some diabolical apparatus.

Four things brought this incident around all right,—the fact that I showed no guilty conscience and went immediately to the woman's home and made explanation to her and her mother; then went immediately to her husband's place of business and let him know the facts; that I had done work for years for relatives of the family who gave my character the absolute O. K. Finally, thank God, the people themselves, even the young woman, were disposed to believe that it was all a mistake and that I had done no wrong.

I finished the work and we are all good friends; but to a man who has always walked the "Straight and Narrow," it was an awful shock and made a lasting impression.

Now isn't this nearly proof positive that a dentist has no business practicing without a lady assistant? On the other hand, if such an accusation is made against him, will the presence of a lady assistant or anything else save him from social disgrace and professional ruin? And in this day of Syndicated Blackmail, as brought out in the papers in the last few months, cannot a similar thing happen to any man and is it not terrible that no matter how upright a man may be, that his whole life is at the mercy of any woman who is mindful to make accusation against him, be it with malice aforethought, or through mistake. *His innocence cuts no figure.* If the accusation is made, *he's guilty* in the sensation-loving mind of the public.

So how about it, Mr. Editor, do we get that "Experience Department?"

Let us hope that very few if any of these experiences will take the tragical or salacious turn, but will rather appeal to our risibilities and will convince us that others than ourselves run across a few of the "darn fools."

I always get a laugh when I tell the story to my professional brothers of the time, during my junior vacation, that I bush-

whacked in the mountains of Kentucky and extracted a tooth for a native Amazon under the promise that it would not hurt. I weighed one hundred and three pounds at the time. She got right up out of that chair and gave me the same kind of a "licking" that I would give my kid if I caught him in a lie.

LOUISVILLE, KY.

Editor Oral Hygiene:

Might I presume on your good graces to help me out of a dilemma that you are partially responsible for? The printing of the A. D. A. report and later some correspondence, has given me a flock of letters of inquiry.

I make a practice of acknowledging all letters and was glad to be of service but naturally thought they would have an end; but although the last you printed was in July, last mail brought me more inquiries than any heretofore, and I want you to answer them in your pages if you will. The Governor's office advises me that all available copies of the Alaska Dental Laws are exhausted, so it would mean no end of writing to answer these letters. I enclose herein one of the copies I have at hand.

"Sec. 5. Any person who desires to begin the practice of dentistry in the Territory of Alaska after the passage of this act shall appear before said board of examiners at any one of its regular or special meetings for examinations. To be eligible for such examination the applicant shall present a diploma from a reputable dental college. The examination shall be conducted in English and shall be thorough, practical and sufficient to test the ability of the applicant to practice dentistry. It shall include: Operative and prosthetic dentistry, osteology, dental and general anatomy, histology, bacteriology, physiology, pathology, chemistry, metallurgy, materia medica, therapeutics, or-

thodontia and anesthetics. Demonstrations in operative prosthetic dentistry, prognosis and diagnosis will be required. All applicants must furnish their own material for demonstrations. If the examinations prove satisfactory to said Board of Dental Examiners, they shall issue a certificate of registration to the person examined. All certificates issued by the board shall be signed by its president, secretary, and a majority of the board and shall have its official seal attached thereto.

"It shall be unlawful for any person or persons, whether registered or not, to operate or run any dental office or parlors, under any name or corporation name other than the name to whom the license is issued."

The Alaska Dental Law went into effect April 30, 1913, and provides (as set forth in Sec. 5). The examination fee is \$25.00 and the next examination is to be held at the capitol in January, 1917. Dr. Kaser of Juneau is the secretary of the board. The law includes a reciprocity clause with states having equal standards but up to now I am not advised of any state boards which have sought to accept such reciprocity.

The Polk Dental Directory advise me that they will print the complete dental law in their next issue, so those wishing details may consult that publication when it is issued.

I guess that your magazine is read by about all the dentists in the world (English-reading), so if you can take care of this you will save me about two weeks' work and \$10.00 in postage—your turn to come to the rescue.

Several inquiries also asked where to obtain the booklets, "Joy of Living." Will you also mention that these are to be had from the Dentinol and Pyorrhocide Co., New York City.

Fraternally,

C. D.
Seward, Alaska.

E-D-I-T-O-R-I-A-L

WM. W. BELCHER,
D.D.S., EDITOR :-

186 Alexander Street
ROCHESTER, N. Y.



ORAL HYGIENE

does not publish Society Announcements, Obituaries, Personals, or Book Reviews. This policy is made necessary by the limited size and wide circulation of the Magazine

"TO HIM THAT HATH RECEIVED"



BEFORE the building that is to house the Rochester Dental Dispensary is completed, two substantial benefactions to its permanent equipment have been announced. The first in memory of the late Frank Ritter, founder of the Ritter Dental Manufacturing Company, estimated at some \$20,000; and now it is announced that Mrs. R. H. Hofheinz will endow a Research Laboratory, in memory of her husband, the late Dr. Rudolph H. Hofheinz. He was one of the directors of the institution and interested in the work of the dispensary since its inception by the Rochester Dental Society, some twelve years past.

This is a new uplift and to the benefit of the whole dental profession. It is in keeping with the intense interest displayed by Dr. Hofheinz in free dental dispensary work during his lifetime and will worthily serve to perpetuate his memory.

In addition to these gifts, the Rochester Dental Society has given the sum of \$1,000 for the establishment of a dental library. The New York State Dental Society, at its last session, appointed Drs. H. J. Burkhart and B. S. Hert as a committee to purchase the beginnings of a dental and anatomical museum to worthily represent the society. This one feature alone will make the new dispensary an educational center to the uplift of the dental profession of the entire state. The library of Dr. Hofheinz will be donated to the library, and under the supervision of Dr. J. Edw. Line, the newly appointed librarian, it is hoped to make this new collection a practical, every-day affair, with the loaning of books, under proper rules and regulations, an important factor.

The future is suggestive of other benefactions of a like nature. Medical hospitals have endowed beds to the memory of individuals; why not endow a dental chair in either the Forsyth or the Rochester Dental Dispensary to the memory of men who deserve such distinction? To our mind, the profession could not do better than endow such a chair to the memory of the late Dr. G. V. Black. Housed in a memorial

building it would be the means of relieving thousands of worthy children in the generations to come and much more to our credit than a statue of marble. The equipment would cost about a thousand dollars and twenty thousand dollars invested at five per cent would furnish an annual income of a thousand dollars, the amount paid at the Forsyth for whole time operators. Could you think of a more practical and magnificent memorial than the establishment of an orthodontia laboratory and chair for the correction of the teeth of the worthy poor? Thousands of children would bless the memory of the man who gave them the boon of health and removed the handicap of going through life with a false face that misrepresented the wearer.

The competition for such a position would insure the very best and an honor to the appointee. A young man engaging in practice, after serving under this appointment, would be assured of high consideration when it was known that he was "Dentist to the Green Vardum Black Memorial." What badge of honor could be more desired? Every dental journal and dentist worthy of the name would lend their aid to such a memorial, and we respectfully offer this suggestion to the committee of the National Dental Association who have the matter in charge.

GOD'S POOR—THE DEVIL'S POOR— THE POOR BELGIANS



LITTLE Belgium is now a tragedy and an epic. Entrenched in the last remaining scrap of their native land, enduring with grim fortitude all the hardships and privations of winter warfare, the soldiers of Belgium are waging one of the grandest fights in history. Many do not know whether they have any family left or not; they have received no word from their loved ones since the beginning of warfare. They suffer in silence and poverty.

One of the greatest comforts of a soldier fighting in wet trenches, covered with mud and shivering with cold, is a smoke; more welcome is a cigarette than even food. It is the one thing most desired after an operation, and painful dressings of his wounds are nothing if allowed to smoke during this time. No matter how ill, his face lights up with a smile at the sight of tobacco.

Under the auspices of the King of Belgium and an influential committee of Belgian men and women, the Belgian Overseas Club are furnishing tobacco to these men who are fighting so heroically. For each twenty-five cents contributed to the fund there is sent to the fighting man, in the name of the donor, fifty good cigarettes and a package of good smoking

tobacco, of which the retail price would be nearly one dollar. This is possible because sent to the front free of duty and transportation. In each package of tobacco is enclosed a stamped postal card, so that the soldier may write himself to thank you for your generosity.

You who smoke help some poor devil in the midst of winter doing a man's work and who is too poor to buy his own smokes. Every twenty-five cent piece means a parcel of happiness to a friendless Belgian soldier.

A blank is enclosed in this issue of the magazine for your remittance to Messrs. J. P. Morgan & Co., 23 Wall St., New York City, who have kindly consented to act as depositories of this fund. Acknowledgment is sent for each remittance received. Use the blank before you forget it. Do it now.

NOTE AND COMMENT

"I'd like to be a farmer lad
And hoe the waving corn,
But nothing seems to make me glad
Like sleeping in the morn."

Additional subscriptions to the Forsyth Loving Cup Fund have been received as follows: Mrs. James Patten, Mrs. John Patten, Mrs. Wilder, Mr. James Patten, Boston, Mass., \$1.00; Dr. Francisco A. Cuadros, Cali, Colombia, S. A., 25c; Dr. N. S. Jenkins, New Haven, Conn., \$5.00; Dr. Edw. T. Darby, Philadelphia, Pa., \$1.00. This brings the total to \$1,247.74. A detailed account of the expenditures will appear in an early issue.

A "Round Table Dinner for the Discussion of Oral Hygiene," at \$1.00 per plate, was a feature of the recent meeting of the Ohio State Dental Society. The dinner was held at the Miami Hotel, Dayton, Ohio, from 6 to 8 P.M., during one day of the session. This gave one hour for the dinner and the same period for twelve speakers on the program to present their views. Needless to say, the talks were short, full of punch, and very much to the point.

U. S. officials have uncovered a new diploma mill in Chicago, and a number of arrests have been made. The federal investigation covers the entire country, and it is expected to expose an international group of fakirs who have sold by mail, law, theological, medical, scientific, music, and literary diplomas from such universities as Yale, Harvard, Berlin, Oxford, Cambridge, Edinburgh, Heidelberg, Chicago and Cincinnati. Iowa is said to be the state in which most of the fake diplomas have been distributed within the last six months. Illinois State officials caused the indictment of a number of doctors and dentists who were operating under fake diplomas and licenses. One hundred and thirty-one prominent persons, it is claimed, are known to have purchased various diplomas. A wealthy Cincinnati man is said to have purchased a literary degree from Harvard University for which he paid \$25,000. The expose comes after an investigation lasting over five months.

The publishers are spending a lot of money on special drawings for the front covers this year. The printer who is responsible for the set-up of the magazine spied the long willowy figure of the blonde lady with freckles on the January cover, and this is what he has to say for himself. He is some compositor; also he does things to poetry:—

Woe is me—woe is me, for I now plainly see
 That my life will be nothing but sorrow;
 All my future looks black—Oh, alas and alack,
 I fear for the coming tomorrows.
 I don't want to shirk, but I simply can't work;
 As a printer, I'll soon be a flivver.
 'Tis sad, but it's true, I am moon-eyed and blue,
 And the doctor is treating my liver.
 I have no appetite and I can't sleep at night.
 I know this worries my mother.
 She thinks I'm not well, but the truth is, I "fell"—
 I'm in love with the girl on the cover.

Chicago has had a "Dental Week" with the slogan, "Watch Your Teeth!" School teachers coöperated with dentists in pointing out conditions requiring the care of a dentist. Health Commissioner Robertson announced that an athletic entertainment in the Coliseum would be held to raise funds for the purchase of 95,000 toothbrushes for Chicago school children. Each of the 1,600 dental students were asked to sell \$3 worth of tickets at 50 cents apiece for this purpose.

Have you joined the Preparedness League of American Dentists? Active membership is one dollar; associate membership no fee. In either case you agree to place the mouth of one soldier, or someone about to become a soldier, in condition. Study-units, in conformity with army requirements, are being established in principal cities. This organization has been endorsed by the National Dental Association and has the hearty support of the government. Send in your application to J. W. Beach, D.D.S., Buffalo, N. Y. We must be ready when our country calls, whether in peace or war. You cannot afford to be neutral on this subject.

The Metropolitan Building is the name of a new office structure just completed in the city of Denver, Colo., which is devoted exclusively to physicians and dentists. Contained therein are a beautiful library and assembly rooms, also a club room where the members may smoke, chat and talk to their friends, the furnishings being provided by subscriptions from physicians and dentists. In celebration of the uplift, a dinner was partaken of at the Albany Hotel the night before Thanksgiving. The president of the Colorado State University made an address of congratulation to the medical society upon their new library. After these festivities were concluded, the meeting adjourned to the new quarters and several more speeches of medical congratulations were delivered. The only indication of the dental library was the legend on the door, "Library of the Denver Dental Association," but the members believe with a little time they can live up to the label. Charles Dickens portrays in one of his novels an actor who purchased at auction a second-hand pump and tub, which necessitated his writing a new play that they could be used to advantage. Thus doth opportunity create new responsibilities. The West has led the way; now for more office buildings devoted to professional use that embody the Denver idea. It certainly is worth copying.

The week of December 4th was "Health and Happiness Week" in Minneapolis, Minn. The week began with a health parade which served to catch the attention of the people. The circus has demonstrated the pulling power of parades and the newspapers served the community by keeping the public attention focused on the exercises of the week. Wednesday was "Personal Hygiene Day"; Thursday, "Safeguarding-of-Health Day," and Friday, "Recreation Day." A dozen or more health talks were given each day and keyed up the public interest. Then came the big meeting; some 3,000 people occupied all the available seats in the auditorium. Large numbers were turned away and an overflow audience, said to number 1,000, was addressed by speakers sent from the platform. Addresses were by Dr. W. A. Evans, Chicago; President George E. Vincent, of the University of Minnesota; Dr. C. H. Oakman, Detroit, and Dr. H. R. Gaylord, Buffalo, head of the New York Cancer Institute. He told the audience that the cause of cancer has not been discovered and no cure for the disease is known, but while the scientists are laboring to solve these problems there are certain practices which, if followed, will save many from the disease. He said that nothing should be allowed to continuously irritate any part of the body. If a jagged tooth cuts the tongue, it must be removed or smoothed. If a smoker gets a white spot on his tongue, he must quit smoking. If a little sore on the lip would not heal, it must be cut out. If the lip were that of a smoker, he must stop. If a woman over thirty got a lump on her breast, she must have it removed. If a woman past the change of life began to bleed, she must have an examination for cancer at once.

Dr. Evans said that politics should play no part in the health department of the city and the people should be taught that health is purchasable and is a good investment. Minneapolis was paying only thirteen cents a year per capita for health purposes and a dollar would be none too much.

Dr. Oakman addressed the children of the schools, making as many as five talks in one day. Talks were also given before the Woman's Club and at a luncheon of the Minneapolis Athletic Club. At the auditorium meeting the subject of his talk was, "Why Minneapolis Should Put More Free Dental Clinics Into the Public and Parochial Schools." Many other noted speakers delivered health talks, which were given twice daily, at 3 and 8 P.M. It is estimated that 20,000 people viewed the health exhibit held in a building centrally located.

The annual report of the chief medical officer, Sir George Newman, of the national board of education (England), shows 855 school medical officers and assistant medical officers employed. Besides these there are 144 ophthalmic surgeons, 35 aural surgeons, 29 Roentgen-ray specialists, 217 dentists and 20 anesthetists. These figures exclude the 215 medical men who form the staffs of the treatment centers in London. Of the 1,300 employed, 103 are women physicians, 88 of whom are whole-time officials. School nurses to the number of 1,484 are employed, of whom 996 do whole-time service.

Mrs. Jennie A. Elby has brought suit against the Travelers Insurance Company in the Cumberland County Court for the full amount of the \$7,500 policy carried by her husband, a druggist of New Cumberland and Harrisburg, on the ground that he died from hemorrhages caused by choking on a toothbrush bristle. The defense bases its case on the autopsy and a medical practitioner who declares that death was due to natural causes.

At the recent meeting of the American Association for the Advancement of Science, in New York City, Robert J. Sprague, of the Massachusetts Agricultural College, discussed "The Constructive Aspect of Birth Control." He said in part:

"Excessive birth-rate beyond the ability of the parents to support, and the resources of the country to provide, is one of the greatest evils that can befall a people. In China, under the fallacies of ancestor worship, population treads upon the heels of subsistence, with the result that famine, pestilence and flood must consume the surplus. In India early marriages and excessive birth-rate, stimulated by religious and philosophical folly, crushes the hopes and possibilities of the race, prevents the education of the young, the creation of capital, and the development of human resources, leaving a tangled, squirming, starving mass of hopeless humanity, stunting and crippling one of the brainiest types of the human race.

"The survival of the merely 'strong' may result in the survival of the strong hog. The barbaric birth-rate of ambitious Germany, hemmed in as she is by other nations, made the great war inevitable, and will, if kept up, make wars forever in the future. Pressure of population on subsistence and area develops brutality, selfishness, and disregard for human life; it crushes leisure, generosity, and art, and makes impossible some of the finer virtues of the race."

For one great section of the population he urged birth control and for another birth release. He pointed out that in Massachusetts, which has been the only State that has for many decades taken birth statistics on a basis of nativity, the records showed that the birth-rate of her foreign-born population was about three times the birth-rate of her native population, mostly Anglo-Saxon in origin.

"Merely to sustain the population and not to increase it," he said, "every married woman must bring up three children. Only one-half the graduates of women's colleges marry, and their average is only one. Birth control among the poor is needed for themselves, but birth release among the upper classes is a national necessity. Man has learned that corn and potatoes must be given proper spacing lest Mother Earth be crowded and they do not grow well, but he has often forgotten to place sufficient spacing between his human children that they might develop to the highest."

The second annual report of the Morristown (N. J.) Dental Clinic Association for the school year 1915-16 shows 908 pupils of the public schools treated, for whom 2,394 operations were performed. Subscriptions to the amount of \$1,126.49 were received, of which \$214.00 was secured by the sale of chocolate and peanuts by public school children. The amount of \$1,093.76 was paid out for maintenance and a balance on hand of \$430.74 shows the charity is in a healthy financial condition.

"Good Teeth, How They Grow and How to Keep Them," is the title of a neatly printed booklet, with many illustrations, gotten out by the S. S. White Dental Manufacturing Company. It is unique in that no mention is made of the products of the company, and the only place their name appears is on the front cover as publishers. The book is intended for popular distribution. Heretofore books of this nature were objectionable to many in that the products of the company issuing have been exploited. We venture the prophecy that the White Company will find this innovation a paying one.

An instance of remarkable recovery from heart failure is reported in *Guy's Hospital Gazette*, October 21st. A six-year-old boy had been given an anesthetic (chloroform two, ether three parts; on open mask) for the removal of tonsils and adenoids, and the operation had been more than half completed when an increasing cyanosis was observed, and the breathing stopped altogether. Artificial respiration was tried without result, and the pulse could not be felt at the wrist. Various remedial measures were promptly applied; oxygen was given, and injections of brandy, ether, and of pituitrin were tried in succession, but failed to produce any signs of restoration.

When about twelve minutes had elapsed since the cessation of respiration, it was decided to open the abdomen and massage the heart. This was effected by a hand insinuated between the liver and diaphragm, and at first no improvement followed vigorous massage. The massage was continued along with artificial respiration, and "an occasional sighing respiration took place." The report states that after about twenty more squeezes, suddenly the heart was felt to begin beating and the respiration became reestablished. Further recovery was very slow, but eventually complete. From the careful estimates of those present, it was considered certain that the heart had stopped at least thirteen minutes.—*The Dental Record*.

Danger disguised in the cloak of safety is a menace of the most potent sort. This is particularly true when it receives the full approbation of health authorities. The bubble fountain is now said to be bedeviled. An epidemic of tonsillitis in the dormitories of the University of Wisconsin unexpectedly directed suspicion to the bubble fountain in the building and it was found to be the cause of trouble. A survey of all fountains of the university showed the presence of streptococci in over 50 per cent of the total number. These varied in abundance from a few chains to almost pure cultures. An explanation was found in the fact that while most of the organisms were floated away when used by a person suffering from disease, some remained dancing in the column, much as a ball dances on the garden fountain. An experiment showed that *bacillus prodigiosus* when artificially introduced by a pipette or by the moistened lips, remained in the water from two to one hundred and thirty-five minutes, depending on the height of the "bubble." A jet of water at an angle of 15 degrees from the vertical was found to prevent micro-organism from "dancing" on the column of water.

It is strictly against the rule to extend reading notices to any advertiser. This is fair to all and we play no favorites. But in mentioning "Fifty-five Office Plans," a neat booklet gotten out by the Ritter Dental Mfg. Co., and sent free on application, we do so with the conviction that every dentist availing himself of the opportunity will be benefited. Undoubtedly the Ritter Company expect to get their share of the white meat, but there is no obligation to purchase equipment. Every square foot of space in the fifty-five plans is doing housework and helping to pay the rent.

Are the red blood corpuscles of man disk-shaped or bell-shaped? We have accepted the fact that they are cup-shaped or bell-shaped, but this is now being seriously questioned. It is claimed that blood examined immediately after withdrawal on a warm slide is favorable for the demonstration of cups, due to an almost instantaneous change caused by evaporation and contraction of plasma before the preparation can be made and examined.

The late Sir Hiram Maxim had some very original ideas on artificial dentures and their need of improvement:

"You teeth-men are all wrong in your construction of artificial teeth," he said. "Fancy constructing teeth all on the same base, and placing them on a tender place like the gums. Each tooth should be treated individually and independently; I am so busy just now with my inventions, otherwise I would soon construct some teeth and show you what I mean. Each artificial tooth should be imbedded in a cushion of air or soft rubber, so as to take up shock, and such shock should not be allowed to be imparted to a neighboring tooth. This is my idea of how an artificial denture should be constructed. Of course, it would have to be worked out properly, but it is on this principle that artificial dentures of the future will be constructed."

It would seem an easy matter to employ flexible rubber in constructing a set as outlined, but it is another story to keep them in a sanitary condition with all the teeth on the denture and not in the wearer's stomach.

"The Regina Municipal News, published monthly for the rate-payers," is the name of a well edited, up-to-the-minute municipal publication devoted to the interests of everyone in sight who resides within the borders of Regina, Sask., Canada. Dr. W. D. Cowan, a dentist with well defined ideas on health matters, including mouth hygiene, is the mayor. He has offered to pay the expenses of any man who will run against him for the office at the next election with no takers. Everyone seems to be satisfied, including Dr. Cowan. He is responsible for an article on dental topics that appears in each issue of the *Municipal News*. They are well expressed in clean-cut English, and the public about Regina are destined to be well informed on matters pertaining to dentistry and the blessings of a clean mouth if Cowan has his way, and there seems to be no one present to say him nay.

Something new in the way of a dental congress was the recent gathering in the city of Paris, under the recognition of the Allied Governments, to consider the treatment of the especially difficult face and jaw wounds and the reconstruction of damaged parts. The congress was made up of representatives from the Allied Governments, National Red Cross societies, army dental surgeons, etc. A party of civilian dental surgeons holding military consultative appointments and members of the staffs of Red Cross hospitals for treating facial wounds, were granted facilities by the military authorities to attend the meeting. Several hospitals offering special facilities for treatment, among them the American Ambulance at Neuilly, were visited. A large number of specimens and exhibits were shown and information derived from actual experience contributed by the delegates.

The credit of the whole world rests on a block of gold sixty feet square. One-half of this belongs to Uncle Sam and the other to the fourteen times as many people of the world. Everything you buy or own is measured by the gold in that cube. All the gold money and bullion above ground is included, but not the gold of commerce, such as gold watches, rings, or that employed in the arts, including dentistry. Eight billion dollars in gold has been mined in the last twenty-five years against an equal amount in the four hundred years preceding. Down to 1895 the world's gold output never reached as much as \$100,000,000 annually. It has steadily advanced and \$470,000,000 was mined in 1915.

Food, white paper, shoes and wages are not the only things "going up" as the result of this European war. It is affecting the monkey market. Monkeys are needed by pathologists for the study of disease, and the National Public Health Service at Washington, D. C., needing a dozen South American monkeys for use in its hygienic laboratory, could get but six and had to pay \$18 each, although a little more than a year ago they were plentiful at \$8 a head. The closing of the world's principal wild animal market at Hamburg, Germany, and lack of shipping are given as the causes. Even the hurdy-gurdy man has his sorrows.

The tenth annual convention of The Association of Life Insurance Presidents, recently held in New York City, brought out the fact that the United States now has more life insurance in force than all the rest of the world, although it has only one-fifteenth of the population. Half the people need medical attention to ward off needless sickness and in many cases premature death was one of the startling statements. Two years' study of original insurance statistics indicated a cancer to be neither hereditary nor contagious. This may be considered conclusive, as life insurance deductions are based on cold facts and not sentiment.

The Orange Dental Clinic, which is supported entirely through the generosity of Mr. Sidney Colgate, of Orange, N. J., president of the Orange Board of Education, makes the following report of operations during the month of October, 1916: Number of new patients, 305; number of sittings, 527; cleanings, 200; treatments of abscess and nerve, 187; extractions, 398; silver fillings, 245; cement, 141. Clinic hours, 8:30 to 12 A.M.

The following appears in the *Melbourne Herald*, issue of September 23d, and the report is the more striking when it is understood that the need of dental attention had to be thrust down the throats of the Australian military authorities who would not consent, and snubbed the dentists who humbly asked to be of service and placed on a par with the veterinary surgeon:

"Since December the military dentists have examined 18,000 men and found only 14 perfect sets of teeth. Operations numbering 24,193 were performed, and 10,225 teeth saved. Without dental attention 35 per cent of the recruits would have been rejected."

In the early days of the war the British authorities could see the need of the veterinary, but the dentist was an unnecessary luxury. The well-equipped Canadian base hospitals with their dental units made a decided impression, but until some system is inaugurated, the British Army Dental Service is a joke. Individual dentists have received warm commendation, but the service as a whole is without a responsible head. Medical men, through lack of training, are unfitted to supervise and organize dental units, and the solution is to follow the lead of the well-organized Canadian Army Dental Corps. The Australian dental corps is doing a great work under very discouraging circumstances.





HEARD IT AFORE

FUNNIES

We want good clean humor for this page and are willing to pay for it. Send me the story that appeals to you as "funny" and if I can use it, you will receive a check on publication—Address EDITOR, 186 Alexander Street, Rochester, N. Y. -:- -:-



THAT'S A GOODUN

AT the wedding reception the young man remarked; "Wasn't it annoying the way that baby cried during the whole ceremony?" "It was simply dreadful," replied the prim little maid of honor; "and when I get married, I'm going to have engraved right in the corner of the invitations; 'No babies expected.'"—J. M. R., Enid, Okla.

ALEXANDER GREENLEAF JACKSON, a pillar of the colored church, was entertaining at dinner the pastor and some prominent members. After grace Alexander began to carve the chicken, and the pastor waxed facetious.

"Brudder Jackson," he asked smilingly, "do de white folks around you keep chickens?"

Alexander pried loose the second wing. "No, sah," he responded, "dey does not, but dey suttinly tries hahd enuff to."

TEACHER—Give me a definition of nothing.

Tommy—A bung-hole without any barrel around it!—W. J. M., Redlands, Calif.

LITTLE Mary had been promised a pair of roller skates and her mother accompanied her to the hardware store to assist in their purchase. The clerk brought out a skate and tried it on Mary but she declared they were not the kind she wanted. Several other stores were visited and in each she declined to purchase. Finally her mother said; "Well, Mary, what kind is it you want?" Mary, almost in tears, answered, "I want the kind where you get two."—M. B., Mansfield, O.

JIMMIE giggled when the teacher read the story of the man who swam across the Tiber three times before breakfast. "You don't doubt that a trained swimmer could do that, do you?" "No sir," answered Jimmie, "but I wonder why he didn't make it four and get back to the side where his clothes were."

BOBBY came home in bad shape with his face bruised and battered, also two front teeth were missing. "Now Bobby," his mother said, "I told you not to fight but you have been at it again and lost two of your teeth." "Ah, no I didn't loose 'em," said Bobby cheerfully, "I got 'em both in my pocket."—H. S., Cin., O.

AN old negro mammy went to the office of the superintendent of the poor and said: "Mistah Cook, we's mighty poor this wintah, an ah wish you would ask the Guv'nah to pahdon mah old man. He's a polumtician, same as you is, and he's in the pen'tentry."

"What was he put in for?"

"Stead of workin' fo' it that good-fo' nothin' nigger done stole some bacon."

"If he is good for nothing what do you want him back for?"

"Well, yo' see, we's all out of bacon ag'in," said the old negress innocently.

RASTUS (at the Negro dance)—"Mandy, as yoah programme full?"

Mandy—"Lawdy, no, Mr. Applewhite, it takes mo' dan two sandwiches an' a cup of tea to fill ma programme."

